

**MARYLAND HISTORICAL TRUST
NR-ELIGIBILITY REVIEW FORM**

NR Eligible: yes ☒
no ☐

Property Name: Frederick Avenue Bridge Inventory Number: B-4619

Address: Gwynns Falls City: Baltimore City Zip Code: 21223

County: Baltimore City USGS Topographic Map: Baltimore West, MD

Owner: Baltimore City

Tax Parcel Number: N/A Tax Map Number: N/A Tax Account ID Number: N/A

Project: Proposed Phase 2 Gwynns Falls Pathway Agency: Maryland State Highway Administration

Site visit by MHT Staff: ☒ no ☐ yes Name: _____ Date: _____

Eligibility recommended ☒ Eligibility not recommended ☐

Criteria: ☐ A ☐ B ☒ C ☐ D Considerations: ☐ A ☐ B ☐ C ☐ D ☐ E ☐ F ☐ G ☒ None

Is the property located within a historic district? ☒ no ☐ yes Name of district: _____

Is district listed? ☐ no ☐ yes Determined eligible? ☐ no ☐ yes District Inventory Number: _____

Documentation on the property/district is presented in:

Description of Property and Eligibility Determination: *(Use continuation sheet if necessary and attach map and photo)*

The Frederick Avenue Bridge is located in the southwestern section of Baltimore where Frederick Avenue crosses Gwynns Falls. Frederick Avenue becomes Frederick Road (State Route 144), near the city line, and the road continues toward its namesake designation, Frederick City.

In 1930, Baltimore City constructed Frederick Avenue Bridge. The reinforced-concrete bridge is 267 feet long with a single-arched span. The asphalt paved roadway is 46 feet wide and is flanked by a pair of concrete sidewalks that are 8'-3" wide. The bridge is in fair condition overall with minor, typical delamination, spalling and cracking at the arches, abutments, pier, and parapets.

The Frederick Avenue Bridge is located west of Baltimore City and crosses over the Gwynns Falls and CSX railroad. Gwynns Falls Park is located southwest of the bridge and consists mostly of open fields. Southeast of the bridge lies a residential area and small businesses. To the northwest of the bridge, there are industrial sites. The entrance to Ellicott Driveway is located to the northeast of the bridge. The Old Frederick Avenue Bridge Abutments are situated immediately adjacent to the south side of the Frederick Avenue Bridge.

The Old Frederick Avenue Bridge Abutments were abandoned when the Frederick Avenue Bridge was built in 1930. The abutments are situated within the wooded banks of Gwynns Falls. As a result, the resource has become obscured by the overgrowth.

MARYLAND HISTORICAL TRUST REVIEW

Eligibility recommended ☒ Eligibility not recommended ☐
Criteria: ☐ A ☐ B ☒ C ☐ D Considerations: ☐ A ☐ B ☐ C ☐ D ☐ E ☐ F ☐ G ☐ None

Comments: _____

Andrew Lewis
Reviewer, Office of Preservation Services

[Signature]
Reviewer, NR program

05/03/01
Date

5/10/01
Date

**MARYLAND HISTORICAL TRUST
NR-ELIBILITY REVIEW FORM**

Continuation Sheet No. 1

B-4619

The Frederick Avenue Bridge is not eligible for listing in the National Register of Historic Places under Criterion A. The bridge is associated with Depression-era constructions during the 1930's, however, the Frederick Avenue Bridge does not represent a broad pattern in history on the local, state, or national level.

The Frederick Avenue Bridge is not eligible for listing in the National Register of Historic Places under Criterion B because it is not associated with the productive years of a person of importance on the local, state, or national level.

The Frederick Avenue Bridge is eligible for listing in the National Register of Historic Places under Criterion C because it is a significant example of concrete arch bridge construction. The bridge type is a reinforced concrete arch bridge, built at the close of a decade when many road and bridge improvements were being made in Maryland in response to the use of the automobile. The bridge contains a high degree of integrity, retaining much of its original building materials, architectural elements, and its original form. The bridge has had no major alterations and retains its original paneled parapets, abutments, wingwalls, and pier. The Frederick Avenue Bridge is eligible for listing in the National Register of Historic Places under C because it is a significant example of concrete arch construction in the Baltimore area.

The Frederick Avenue Bridge and environs are unlikely to yield new information in terms of archaeological study of the area, and therefore, is not eligible for listing in the National Register of Historic Places under Criterion D.

Prepared by: Ward Bucher, Lisa Johnson,
Megan Shilling

Date Prepared: March 2001

BALTIMORE WEST QUAD

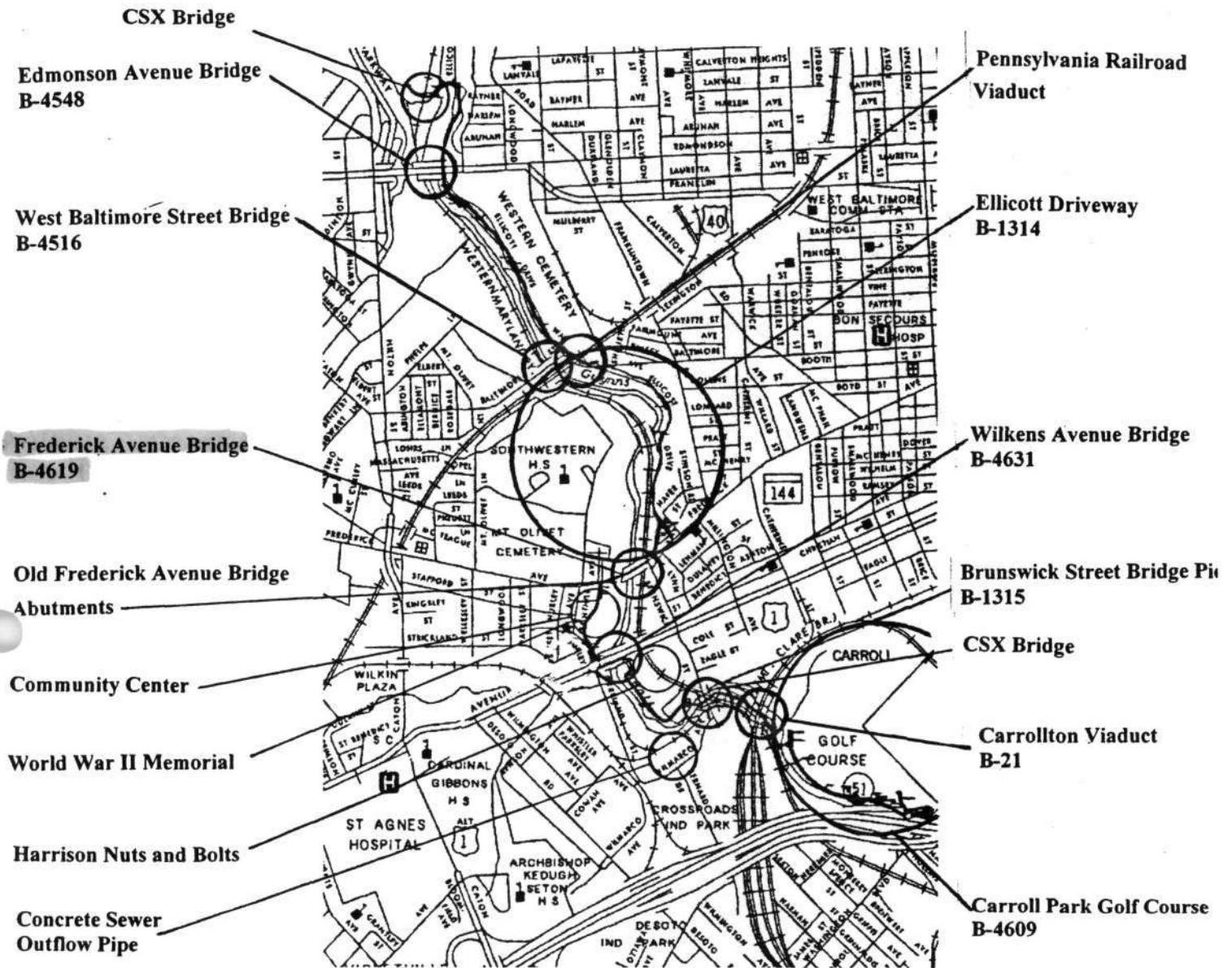
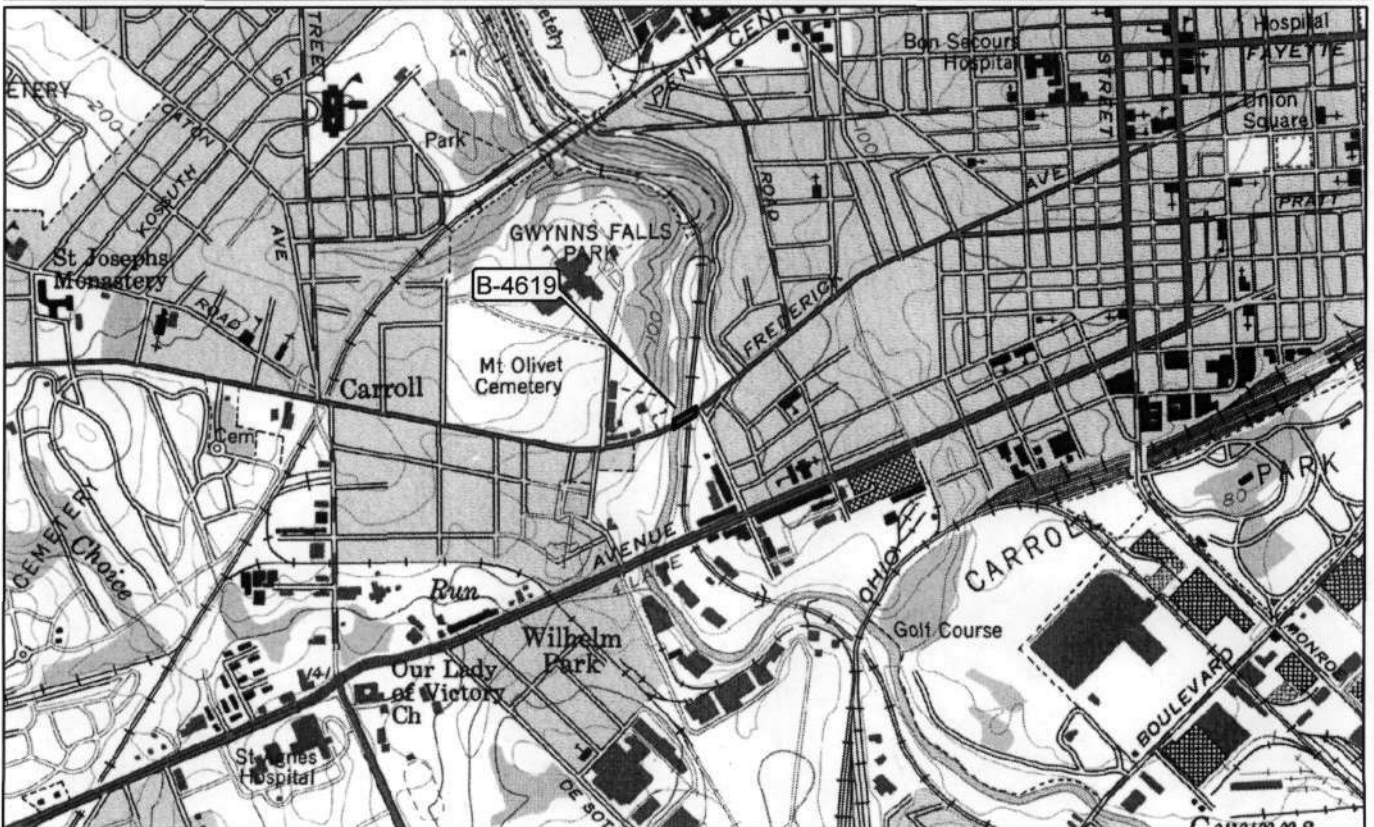


Figure 1. Map Showing Gwynns Falls Area including the Proposed Phase 2 Pathway.

GIS data Courtesy of
the City of Baltimore, MOIT/EGIS





MIHP#: B-4619

FREDERICK AVENUE BRIDGE

BALTIMORE CITY, MD

WARD/BUCHER

MARCH 2000

FREDERICK AVENUE BRIDGE, VIEW NORTH

#1 OF 1

(NO. 24 2E042898 0785 11 11 512

Maryland Historical Trust

Maryland Inventory of Historic Properties number: B-4619.

Name: FEEDBACK AVE. over G. WYNN'S FAIR & CSX

The bridge referenced herein was inventoried by the Maryland State Highway Administration as part of the Historic Bridge Inventory, and SHA provided the Trust with eligibility determinations in February 2001. The Trust accepted the Historic Bridge Inventory on April 3, 2001. The bridge received the following determination of eligibility.

MARYLAND HISTORICAL TRUST	
Eligibility Recommended <u>X</u>	Eligibility Not Recommended _____
Criteria: <u>A</u> <u>B</u> <u>X</u> <u>C</u> <u>D</u> Considerations: <u>A</u> <u>B</u> <u>C</u> <u>D</u> <u>E</u> <u>F</u> <u>G</u> <u>None</u>	
Comments: _____	

Reviewer, OPS: <u>Anne E. Bruder</u>	Date: <u>3 April 2001</u>
Reviewer, NR Program: <u>Peter E. Kurtze</u>	Date: <u>3 April 2001</u>

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MARYLAND INVENTORY OF HISTORIC BRIDGES
HISTORIC BRIDGE INVENTORY
MARYLAND STATE HIGHWAY ADMINISTRATION/
MARYLAND HISTORICAL TRUST

MHT No. B-4619

SHA Bridge No. BC 2206 Bridge name Frederick Avenue over Gwynns Falls and CSXRR

LOCATION:

Street/Road name and number [facility carried] Frederick Avenue (MD 144)

City/town Baltimore City Vicinity _____

County Baltimore

This bridge projects over: Road _____ Railway X Water X Land _____

Ownership: State _____ County _____ Municipal X Other _____

HISTORIC STATUS:

Is the bridge located within a designated historic district? Yes _____ No X
National Register-listed district _____ National Register-determined-eligible district _____
Locally-designated district _____ Other _____

Name of district _____

BRIDGE TYPE:

Timber Bridge _____:
Beam Bridge _____ Truss -Covered _____ Trestle _____ Timber-And-Concrete _____

Stone Arch Bridge _____

Metal Truss Bridge _____

Movable Bridge :
Swing _____ Bascule Single Leaf _____ Bascule Multiple Leaf _____
Vertical Lift _____ Retractable _____ Pontoon _____

Metal Girder _____:
Rolled Girder _____ Rolled Girder Concrete Encased _____
Plate Girder _____ Plate Girder Concrete Encased _____

Metal Suspension _____

Metal Arch _____

Metal Cantilever _____

Concrete X _____:
Concrete Arch X _____ Concrete Slab _____ Concrete Beam _____ Rigid Frame _____

Other _____ Type Name _____

B-4619

DESCRIPTION:Setting: Urban X Small town _____ Rural _____**Describe Setting:**

Bridge BC 2206 carries Frederick Avenue over Gwynns Falls and the CSX Railroad in Baltimore City. Frederick Avenue runs east-west and Gwynns Falls flows south. The bridge is located in the eastern section of Baltimore City, and is surrounded by a residential area with a small commercial area containing some businesses and shops.

Describe Superstructure and Substructure:

Bridge BC 2206 is a 2-span, 2-lane, filled concrete arch bridge. The bridge was originally built in circa 1930, and metal guardrails were added in 1989. The structure is 267 feet long and has a clear roadway width of 46 feet; there are 2 sidewalks each measuring 8 feet 4 inches wide. There is an overall width of 66 feet 7 inches. The superstructure consists of 2 concrete arches that support a concrete deck and solid concrete parapets. The arches span 102 feet with a clear height of 20 feet. The concrete has a bituminous wearing surface. The roadway approaches have w-beam guardrails. The substructure consists of 2 concrete abutments, and a concrete pier. There are 4 flared concrete wingwalls. The bridge is not posted, and has a sufficiency rating of 65.7.

According to the 1995 inspection report, this structure was in fair condition with overall delamination and spalling. The asphalt wearing surface has settled unevenly, and has transverse and longitudinal cracks. The concrete is delaminated and spalling, especially in the arches. There is exposed reinforcement bar on the north side of the east arch at the east abutment. The abutments have hairline cracks, and the pier has large spalls. Also, the concrete parapets are typically spalled, delaminated, and cracked throughout.

Discuss Major Alterations:

This bridge has undergone small repairs and patching, but has had no major alterations.

HISTORY:WHEN was the bridge built: 1930This date is: Actual _____ Estimated XSource of date: Plaque _____ Design plans _____ County bridge files/inspection form X Other (specify): _____**WHY was the bridge built?**

The bridge was constructed in response to the need for more efficient transportation network and increased load capacity.

WHO was the designer? Baltimore City**WHO was the builder?** Baltimore City**WHY was the bridge altered?** N/A**Was this bridge built as part of an organized bridge-building campaign?**

There is no evidence that the bridge was built as part of an organized bridge building campaign.

SURVEYOR/HISTORIAN ANALYSIS:**This bridge may have National Register significance for its association with:**

A - Events _____ B- Person _____

C- Engineering/architectural character X

The bridge is eligible for the National Register of Historic Places under Criterion C, as a significant example of concrete arch construction. The structure has a high degree of integrity and retains such character-defining elements of the type as its paneled parapets, filled spandrel walls, abutments, wingwalls, and pier.

Was the bridge constructed in response to significant events in Maryland or local history?

The advent of modern concrete technology fostered a renaissance of arch bridge construction in the United States. Reinforced concrete allowed the arch bridge to be constructed with much more ease than ever before and maintained the load-bearing capabilities of the form. As the structural advantages of reinforced concrete became apparent, the heavy, filled barrel of the arch was lightened into ribs. Spandrel walls were opened, to give a lighter appearance and to decrease dead load. This enabled the concrete arch to become flatter and multi-centered, with longer spans possible. Designers were no longer limited to the semicircular or segmental arch form of the stone arch bridge. The versatility of reinforced concrete permitted development of a variety of economical bridges for use on roads crossing small streams and rivers.

Maryland's roads and bridge improvement programs mirrored economic cycles. The first road improvement of the State Roads Commission was a 7-year program, starting with the Commission's establishment in 1908 and ending in 1915. Due to World War I, the period from 1916-1920 was one of relative inactivity; only roads of first priority were built. Truck traffic resulting from war related factories and military installations generated new, heavy traffic unanticipated by the builders of the early road system. From 1920-1929, numerous highway improvements occurred in response to the increase in Maryland motor vehicles from 103,000 in 1920 to 320,000 in 1929, with emphasis on the secondary system of feeder roads that moved traffic from the primary roads built before World War I. After World War I, Maryland's bridge system also was appraised as too narrow and structurally inadequate for the increasing traffic, with plans for an expanded bridge program to be handled by the Bridge Division, set up in 1920. In 1920 under Chapter 508 of the Acts of 1920 the State issued a bond of \$3,000,000.00 for road construction; the primary purpose of these monies was to meet the state obligations involving the construction of rural post roads. The secondary purpose of these monies was to fund (with an equal sum from the counties) the building of lateral roads. The number of hard surfaced roads on the state system grew from 2000 in 1920 to 3200 in 1930. By 1930, Maryland's primary system had been inadequate to the huge freight trucks and volume of passenger cars in use, with major improvements occurring in the late 1930's. Most improvements to local roads waited until the years after World War I.

As the nation's automotive traffic increased in the early twentieth century, local road networks were consolidated, and state highway departments were formed to supervise the construction and improvement of state roads. With a diverse topographical domain encompassing numerous small and large crossings, Maryland engineers quickly recognized the need for expedient design and construction through the standardization of bridge designs.

The concept and practice of standardization was one of the most important developments in engineering of the twentieth century. In Maryland, as in the rest of the nation, the standardized concrete types became the predominant bridge types built. In the period 1911 to 1920 (the decade in which standardized plans were introduced), beams and slabs constituted 65 percent and arches 35 percent of the extant 29 bridges built in Maryland. In the following decade, 1921-1930, the beam (now the T-beam) and slab increased to 73 percent and the arch had declined to 27 percent of the 129 extant bridges; in the next decade (1931-1940), the beam and slab achieved 82 percent and arches had further declined, constituting only 18 percent of the total of extant bridges built on state-owned roads between 1931 and 1946.

Although beam and slab bridges became the utilitarian choice, it appears that the arch was selected when aesthetics as well as other site conditions were considered. The architectural treatment of extant arch bridges supports this assessment. Many of these bridges were multiple span structures with open spandrels or masonry facing. Another decorative feature of the concrete arch bridge was an open, balustrade-style parapet. Despite the popularity of ornamental arches and the increase in use of beam and slab bridges, examples of simpler, single and multiple span closed concrete arch bridges with solid parapets continued to be constructed throughout the early twentieth century.

When the bridge was built and/or given a major alteration, did it have a significant impact on the growth and development of the area?

There is no evidence that the construction of this bridge had a significant impact on the growth and development of this area.

Is the bridge located in an area that may be eligible for historic designation and would the bridge add to or detract from the historic/visual character of the potential district?

The bridge is located in an area that does not appear to be eligible for historic designation.

Is the bridge a significant example of its type?

The bridge is a good example of a concrete arch bridge, retaining a high degree of integrity.

Does the bridge retain integrity of important elements described in Context Addendum?

The bridge retains the character-defining elements of its type, as defined by the Statewide Historic Bridge Context, including paneled parapets, incised spandrel walls, abutments, pier, wingwall, barrel and arch ring, however some deterioration is evident.

Is the bridge a significant example of the work of a manufacturer, designer, and/or engineer?

This bridge is a significant example of the work of the Baltimore City Department of Highways.

Should the bridge be given further study before an evaluation of its significance is made?

No further study of this bridge is required to evaluate its significance.

BIBLIOGRAPHY:

County inspection/bridge files X SHA inspection/bridge files
Other (list):

Johnson, Arthur Newhall

1899 The Present Condition of Maryland Highways. In *Report on the Highways of Maryland*. Maryland Geological Survey, The Johns Hopkins University Press, Baltimore.

P.A.C. Spero & Company and Louis Berger & Associates

1995 Historic Highway Bridges in Maryland: 1631-1960: Historic Context Report. Maryland State Highway Administration, Maryland State Department of Transportation, Baltimore, Maryland.

Tyrrell, H. Grattan

1909 *Concrete Bridges and Culverts for Both Railroads and Highways*. The Myron C. Clark Publishing Company, Chicago and New York.

SURVEYOR:

Date bridge recorded December 1997

Name of surveyor Wallace, Montgomery & Associates / P.A.C. Spero & Company

Organization/Address P.A.C. Spero & Co., 40 W. Chesapeake Avenue, Baltimore, MD 21204

Phone number (410) 296-1635 FAX number (410) 296-1670

Maryland Historic Highway Bridges
Bridge Type CONCRETE ARCH
MHT# B-4619
Map D-12 BALTIMORE SW
County BALTIMORE CITY
Bridge # and name BC 2206, FRED
ERICK AVE. OVER GWYNNS FA





Inventory # B-4619

2206-FREDERICK AVE OVER GWYNNS

Name FALLS AND CSX

County/State BALTIMORE CITY | MARYLAND

Name of Photographer TIM SCHWEN

Date 1/95

Location of Negative SHA

Description EAST APPROACH

Number 16 of 37 1 of 4



Inventory # B-4619

2206 - FREDERICK AVE OVER GWYNNS

Name FALLS AND CSX

County/State BALTIMORE CITY / MD

Name of Photographer TIM SCHOEN

Date 1/95

Location of Negative SNA

Description WEST APPROACH

Number ~~17 of 31~~ 2 of 4



Inventory # B-4619

2200-FREDERICK AVE OVER GWYNNS
Name FALLS AND CSX

County/State BALTIMORE CITY / MD

Name of Photographer TIM SCHUEN

Date 1/95

Location of Negative SNA

Description SOUTH ELEVATION

Number ~~10~~ of 3 3 of 4



Inventory # B-4619

2206- FREDERICK AVE OVER GWYNNS

Name FALLS AND CSX

County/State BALTIMORE CITY / MD

Name of Photographer TIM SCHEN

Date 1/95

Location of Negative SHA

Description NORTH ELEVATION

Number ~~19~~ of ~~37~~ 4 of 4